

**AMENDMENTS TO THE CLAIMS WITH MARKINGS TO SHOW CHANGES
MADE, AND LISTING OF ALL CLAIMS WITH PROPER IDENTIFIERS**

1.-5. (Canceled)

6. (Currently amended) A permanent-magnet excited synchronous motor, comprising:

a stator having a plurality of tooth coils ~~providing a pole coverage of 85%; and~~

a rotor with a plurality of poles interacting with the stator and constructed to dampen ~~at least one of the harmonics of the rotor field selected from the group consisting of~~ both the fifth harmonic and seventh harmonic of the rotor field,

wherein at least one of the rotor and stator has a skew of which with respect to the synchronous motor is between half of $\frac{3}{5}$ of a slot pitch and 60% of a slot pitch with respect to the synchronous motor, and

wherein the rotor has a pole coverage of between 85% and 90%.

7. (Currently amended) A permanent-magnet excited synchronous motor, comprising:

a stator having with a plurality of tooth coils ~~providing a pole coverage of 80%, and~~

a rotor with a plurality of poles interacting with the stator and constructed to dampen ~~at least one of the harmonics of the rotor field selected from the group consisting of~~ both the fifth harmonic and seventh harmonic of the rotor field,

wherein at least one of the rotor and stator has a skew of which with respect to the synchronous motor is between half of a slot pitch and 0.4285 times $\frac{3}{7}$ of a slot pitch with respect to the synchronous motor, and

wherein the rotor has a pole coverage of 80% ($\pm 10\%$).

8. (Currently amended) A permanent-magnet excited synchronous motor, comprising:

a stator having with a plurality of tooth coils ~~providing a pole coverage of 85%, and~~

a rotor disposed for rotation in the stator and having a pole coverage of between 85% and 90%,

wherein a total combined skew between the rotor and the stator of 3/5 ~~one half of a slot pitch and 60% of a slot pitch~~ is apportioned to the stator and the rotor for damping the fifth harmonic ~~[[or]]~~ and the seventh harmonic, ~~or both,~~ of the rotor field.

9. (Currently amended) A permanent-magnet excited synchronous motor, comprising:

a stator having with a plurality of tooth coils ~~providing a pole coverage of 80%, and~~

a rotor disposed for rotation in the stator and having a pole coverage of 80% ($\pm 10\%$),

wherein a total combined skew between the rotor and the stator of 3/7 ~~one half of a slot pitch and 0.4285 times a slot pitch~~ is apportioned to the stator and the rotor for damping the fifth harmonic ~~[[or]]~~ and the seventh harmonic, ~~or both,~~ of the rotor field.

10. (New) The permanent-magnet excited synchronous motor of claim 6, wherein the rotor comprises a plurality of permanent magnets and the permanent magnets are arranged or magnetized in an axial direction of the rotor so as to provide a desired rotor skew.

11. (New) The permanent-magnet excited synchronous motor of claim 10, wherein the permanent magnets are selected from the group consisting of thin plate magnets, ring-shaped magnets and cup-shaped magnets.

12. (New) The permanent-magnet excited synchronous motor of claim 7, wherein the rotor comprises a plurality of permanent magnets and the permanent magnets are arranged or magnetized in an axial direction of the rotor so as to provide a desired rotor skew.
13. (New) The permanent-magnet excited synchronous motor of claim 12, wherein the permanent magnets are selected from the group consisting of thin plate magnets, ring-shaped magnets and cup-shaped magnets.
14. (New) The permanent-magnet excited synchronous motor of claim 8, wherein the rotor comprises a plurality of permanent magnets and the permanent magnets are arranged or magnetized in an axial direction of the rotor so as to provide a desired portion of the total skew.
15. (New) The permanent-magnet excited synchronous motor of claim 14, wherein the permanent magnets are selected from the group consisting of thin plate magnets, ring-shaped magnets and cup-shaped magnets.
16. (New) The permanent-magnet excited synchronous motor of claim 9, wherein the rotor comprises a plurality of permanent magnets and the permanent magnets are arranged or magnetized in an axial direction of the rotor so as to provide a desired portion of the total skew.
17. (New) The permanent-magnet excited synchronous motor of claim 16, wherein the permanent magnets are selected from the group consisting of thin plate magnets, ring-shaped magnets and cup-shaped magnets.